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09/10/2003

Josef Glasmann

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STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

HOANG, HIEU T

ART UNIT

PAPER NUMBER

2152

MAIL DATE

DELIVERY MODE

11/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/658,604

Applicant(s)

GLASMANN ET AL.

Examiner

Hieu T. Hoang

Art Unit

2152

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the communication filed on 10/10/2007.
2. Claims 15-18 are new.
3. Claims 1-14 are pending and presented for examination.

Response to Arguments

4. Applicant's arguments have been fully considered but are not persuasive.
5. Argument 1 is in par. 6 of page 6 of the Remarks wherein the applicant argues that Sundqvist does not map an existing reservation of transmission resources to changed topology based on new topology data. The examiner respectfully traverses. Sundqvist clearly discloses updating resource map to the new change of topology (p. 11 lines 21-23, p. 13 lines 14-28, resource booking is mapped to new resources due to topology change)
6. Argument 2 is in par. 3 of page 7 wherein the applicant argues that Dinker does not deal with the problem of resource management for applications in case to topology changes. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).
7. Argument 3 is in par. 5 of page 6 and par. 4 of page 7 wherein the applicant argues that Sundqvist-Dinker does not disclose a "static resource reservation mode".

The examiner respectfully traverses. Refer to [0037] of the specification, a static reservation mode is a time period wherein the network topology is inconsistent. Dinker discloses a “transient mode”, which is also a period wherein a node may enter and follow a static topology when it receives a topology change (a node request to join the current topology) from the network and returns to its original state when the joining process has been completed (abstract, col. 7 lines 7-30).

8. Argument 4 is in par. 7 of page 7 of the Remarks wherein the applicant argues that Pan does not map an existing reservation of transmission resources to changed topology based on new topology data. The examiner respectfully traverses. Pan clearly discloses mapping resource reservation with the changed topology (col. 8 lines 65-67, col. 6 lines 41-65, col. 8 lines 21-37)

Claim Objections

9. Claims 15-18 are objected to because of the following informalities: the claims contain elements in parentheses. These elements may refer back to the elements in the drawings. These elements are given no weight in the examining process. Appropriate correction is required.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

11. Claim 1 is rejected under 35 U.S.C. 102(a) as being anticipated by Sundqvist et al. (WO 02/21797 A1, hereafter Sundqvist).

12. For claim 1, Sundqvist discloses a method for checking transmission resources of a packet-oriented communication network upon a change in topology of the packet-oriented communication network (abstract), comprising:

- checking a reservation of the transmission resources by a resource manager based on topology data affecting the topology of the packet-oriented communication network (p. 10 lines 4-7, the resource manager decides transmission resources and correct routing based on the topology of the IP network, p. 13, lines 10-24, a bandwidth request or a reservation of transmission resource is based on resource map which is based on topology);
- transferring change information to the resource manager as a result of a topology change of the packet-oriented communication network (p. 11, lines 21-23, the resource manager monitors changes in topology);
- recording in response to receipt of the change information by the resource manager, new topology data relating to the topology change of the packet-oriented communication network (p. 11 lines 21-25, any topology changes is acknowledged by the resource manager); and

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- mapping, by the resource manager, an existing reservation of the transmission resources to the changed topology based on the new topology data (p. 11 lines 21-23, p. 13 lines 14-28, resource map is updated when a topology change is received at the resource manager, resource booking is mapped to new resources due to topology change).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 2-7, 9-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sundqvist as applied to claim 1 above, and further in view of Dinker et al. (US 7,024,483, hereafter Dinker).

15. For claim 2, Sundqvist does not disclose temporarily entering a static resource reservation mode in the resource manager in response to the receipt of the topology change information.

However, Dinker discloses temporarily entering a static resource reservation mode in the resource manager in response to the receipt of the topology change information (abstract, col. 7 lines 7-30, a node may enter a transient state that follows a static description of a topology when it receives the request to join or exit the network)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Sundqvist and Dinker to implement a transient state in order to prevent conflicting requests from conflicting or complicating reservation decision in the topology (Dinker, col. 13 l. 5-10)

16. For claim 3, Sundqvist-Dinker discloses the invention as in claim 2. Sundqvist-Dinker further discloses extending the static resource reservation mode in the resource manager by a specified period in response to receipt of additional topology change information during the static resource reservation mode (Dinker, col. 13 l. 10-12, while in a transient state, a node holds subsequent connect requests as pending to process them after the status of previous requests have been resolved).

17. For claim 4, Sundqvist-Dinker discloses the invention as in claim 3. Sundqvist-Dinker further discloses the specified period is dependent on at least one of an extent of change in the topology and a size of the packet-oriented communication network (Dinker, col. 13 l. 10-12, while in a transient state, a node holds subsequent connect requests as pending to process them after the status of previous requests have been resolved; the more changes there are to the topology, the longer the transient phase is).

18. For claim 5, Sundqvist-Dinker discloses the invention as in claim 4. Sundqvist-Dinker further discloses leaving the static resource reservation mode in the resource manager after at least one of said recording of the new topology data and said mapping of the existing resource reservation to the changed topology (Dinker, col. 13 l. 26-28, a node may transition from a transient state to a joined state after completing any updates of its topology data).

19. For claim 6, Sundqvist-Dinker discloses the invention as in claim 5. Sundqvist-Dinker further discloses specifically marking, by the resource manager, a resource reservation made during the static resource reservation mode (Dinker, col. 13 l. 10-12, subsequent connection requests are queued for processing during the transient state).

20. For claim 7, Sundqvist-Dinker discloses the invention as in claim 6. Sundqvist-Dinker further discloses reservation of the transmission resources in the static resource reservation mode is based on old topology data present before the topology change (Dinker, col. 7 lines 15-20, col. 9 lines 50-52, static topology applies to the connection requests in transient state).

21. For claim 9, Sundqvist-Dinker discloses the invention as in claim 6. Sundqvist-Dinker further discloses transferring a localization specification with the topology change information to specify an area of the packet-oriented communication network affected by the topology change (Sundqvist, fig. 5, topology change affects the area of packet-oriented network behind a gateway G).

22. For claim 10, Sundqvist-Dinker discloses the invention as in claim 9. Sundqvist-Dinker further discloses:

rejecting, by the resource manager in static resource reservation mode, resource requests which affect the area specified by the localization specification, regardless of the resource reservation of the transmission resources (Dinker, col. 7 lines 8-12, rejecting subsequent requests to avoid conflicts); and

processing, by the resource manager in static resource reservation mode, resource requests which do not affect the area specified by the localization specification based on the reservation of transmission resources present before the topology change (Dinker, col. 7 lines 15-20, col. 9 lines 50-52, static topology of a cluster applies to the connection requests in transient state in the cluster area).

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23. For claim 11, Sundqvist-Dinker discloses the invention as in claim 10. Sundqvist-Dinker further discloses said mapping of the existing resource reservation to the changed topology includes the resource manager checking whether an overbooking of the transmission resources is occurring (Sundqvist, col. 13 lines 14-28, a preliminarily booking of a resource that can not be mapped due to lacking of resource).

24. For claim 12, Sundqvist-Dinker discloses the invention as in claim 11. Sundqvist-Dinker further discloses upon the resource manager upon establishing an overbooking, one of clearing a connection contributing to the overbooking by assigning the connection to another class of service to be carried via another route (Sundqvist, col. 13 lines 19-28, a user prioritizes a service in favor of the other, in case of lack of resource, switch to a lower quality service), and using coding with reduced resource requirements.

25. For claim 13, Sundqvist-Dinker discloses the invention as in claim 12. Sundqvist-Dinker further discloses said mapping of the existing reservation of resources to the changed topology includes at least one of preferring more recent connections to older connections; preferring voice connections to connections of other connection types (Sundqvist, col. 12 lines 1-2, gatekeeper prioritizes services whenever topology changes occur by letting voice service to have higher priority than other services, e.g., video service); preferring connections with at least one of a user feature-dependent priority and a service feature-dependent priority; preferring connections with relatively low resource requirements; and preferring connections set up outside the static resource reservation mode to connections set up during the static resource reservation mode during an assignment of transmission resources.

26. For claim 14, Sundqvist-Dinker discloses the invention as in claim 13. Sundqvist-Dinker further discloses recording the topology data relating to the topology of the packet-oriented communication network by a topology manager; and transferring the topology data from topology manager to the resource manager (Dinker, fig. 2, topology manager 203, state manager 202, Sundqvist, fig. 5, resource manager).

27. For claim 15, Sundqvist discloses a method for checking transmission resources of a packet-oriented communication network on topology change, whereby:

a) a resource manager checks a reservation of transmission resources on a basis of topology data affecting topology of the communication network (p. 10 lines 4-7,

the resource manager decides transmission resources and correct routing based on the topology of the IP network, p. 13, lines 10-24, a bandwidth request or a reservation of transmission resource is based on resource map which is based on topology);

b) as a result of a topology change of the communication network, topology change information is transferred to the resource manager (p. 11 lines 21-25, any topology changes is acknowledged by the resource manager); and

Sundqvist does not explicitly disclose:

c) as a result of receiving the topology change information, the resource manager detects an inconsistency phase and temporarily goes into a static resource reservation mode.

However, Dinker discloses the same (abstract, col. 7 lines 7-30, a node may enter a transient state that follows a static description of a topology when it receives the request to join or exit the network)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Sundqvist and Dinker to implement a transient state in order to prevent conflicting requests from conflicting or complicating reservation decision in the topology (Dinker, col. 13 l. 5-10)

28. For claim 16, the claim is rejected for the same rationale as in claim 3.

29. For claim 17, the claim is rejected for the same rationale as in claim 4.

30. For claim 18, Sundqvist-Dinker discloses the invention as in claim 15. Sundqvist-Dinker further discloses as soon as the resource manager detects an end of the inconsistency phase (Dinker, returning to original state when joining process completes),

a) the resource manager records new topology data relating to changed topology of the communication network (Sundqvist, p. 10 lines 4-7, p. 11 lines 1-7 and 21-25, the resource manager decides transmission resources and correct routing based on the topology of the IP network); and

b) the resource manager maps an existing reservation of the transmission resources on a basis of the new topology data to the changed topology (Sundqvist, p. 13, lines 10-24, a bandwidth request or a reservation of resource is based on resource map which is based on new topology).

31. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sundqvist as applied to claim 6 above, and further in view of Pan et al. (US 6,760,306, hereafter Pan)

32. For claim 8, Sundqvist-Dinker discloses the invention as in claim 6. Sundqvist-Dinker further discloses rejecting, by the resource manager in static resource reservation mode, resource requests (Dinker, col. 7 lines 8-12, rejecting subsequent requests to avoid conflicts).

Sundqvist-Dinker does not explicitly disclose allowing resource releases independently of assignment of the transmission resources.

However, Pan discloses the same (col. 6 lines 15-24, col. 9 lines 43-46, deactivation and deletion of resource reservation, and release resource)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Sundqvist-Dinker and Pan to further release resource to available resource pool so that released resource can be used for later connections requests.

Second rejection

33. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Pan et al. (US 6,760,306, hereafter Pan).

34. For claim 1, Pan discloses a method for checking transmission resources of a packet-oriented communication network upon a change in topology of the packet-oriented communication network (abstract), comprising:

- checking a reservation of the transmission resources by a resource manager based on topology data affecting the topology of the packet-oriented communication network (fig. 2, col. 8 lines 38-48, resource reservation is checked based on topology changes);

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- transferring change information to the resource manager as a result of a topology change of the packet-oriented communication network (fig. 2, col. 8 lines 38-40, topology change is transferred to a resource manager);
- recording in response to receipt of the change information by the resource manager, new topology data relating to the topology change of the packet-oriented communication network (col. 8 lines 40-46, 52-54, any topology changes is acknowledged network topology monitor 24 in the resource manager 25); and
- mapping, by the resource manager, an existing reservation of the transmission resources to the changed topology based on the new topology data (col. 8 lines 65-67, mapping resource reservation with the changed topology, col. 6 lines 41-65, col. 8 lines 21-37).

35. Claims 2-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pan as applied to claim 1 above, and further in view of Dinker.

36. For claim 2, Pan does not disclose temporarily entering a static resource reservation mode in the resource manager in response to the receipt of the topology change information.

However, Dinker discloses temporarily entering a static resource reservation mode in the resource manager in response to the receipt of the topology change information (abstract, col. 7 lines 7-30, a node may enter a transient state or a static resource reservation mode that follows a static description of a topology when it receives the request to join or exit the network)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Pan and Dinker to implement a transient state in order to prevent conflicting requests from conflicting or complicating reservation decision in the topology (Dinker, col. 13 l. 5-10)

37. For claim 3, Pan-Dinker discloses the invention as in claim 2. Pan-Dinker further discloses extending the static resource reservation mode in the resource manager by a specified period in response to receipt of additional topology change information during the static resource reservation mode (Dinker, col. 13 l. 10-12, while in a transient state, a node holds subsequent connect requests as pending to process them after the status of previous requests have been resolved).

38. For claim 4, Pan-Dinker discloses the invention as in claim 3. Pan-Dinker further discloses the specified period is dependent on at least one of an extent of change in the topology and a size of the packet-oriented communication network (Dinker, col. 13 l. 10-12, while in a transient state, a node holds subsequent connect requests as pending to process them after the status of previous requests have been resolved; the more changes there are to the topology, the longer the transient phase is).

39. For claim 5, Pan-Dinker discloses the invention as in claim 4. Pan-Dinker further discloses leaving the static resource reservation mode in the resource manager after at least one of said recording of the new topology data and said mapping of the existing resource reservation to the changed topology (Dinker, col. 13 l. 26-28, a node may transition from a transient state to a joined state after completing any updates of its topology data).

40. For claim 6, Pan-Dinker discloses the invention as in claim 5. Pan-Dinker further discloses specifically marking, by the resource manager, a resource reservation made during the static resource reservation mode (Dinker, col. 13 l. 10-12, subsequent connection requests are queued for processing during the transient state).

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41. For claim 7, Pan-Dinker discloses the invention as in claim 6. Pan-Dinker further discloses reservation of the transmission resources in the static resource reservation mode is based on old topology data present before the topology change (Dinker, col. 7 lines 15-20, col. 9 lines 50-52, static topology applies to the connection requests in transient state).

42. For claim 8, Pan-Dinker discloses the invention as in claim 6. Pan-Dinker further discloses rejecting, by the resource manager in static resource reservation mode, resource requests (Dinker, col. 7 lines 8-12, rejecting subsequent requests to avoid conflicts), and allowing, by the resource manager in static resource reservation mode, resource releases independently of assignment of the transmission resources (Pan, col. 6 lines 15-24, col. 9 lines 43-46; deactivation and deletion of resource reservation, and release resource)

43. For claim 9, Pan-Dinker discloses the invention as in claim 6. Pan-Dinker further discloses transferring a localization specification with the topology change information to specify an area of the packet-oriented communication network affected by the topology change (Pan, col. 8 lines 54-57, using link state monitor to determine shortest path between two nodes).

44. For claim 10, Pan-Dinker discloses the invention as in claim 9. Pan-Dinker further discloses:

rejecting, by the resource manager in static resource reservation mode, resource requests which affect the area specified by the localization specification, regardless of the resource reservation of the transmission resources (Dinker, col. 7 lines 8-12, rejecting subsequent requests to avoid conflicts); and

processing, by the resource manager in static resource reservation mode, resource requests which do not affect the area specified by the localization specification based on the reservation of transmission resources present before the topology change (Dinker, col. 7 lines 15-20, col. 9 lines 50-52, static topology of a cluster applies to the connection requests in transient state in the cluster area).

45. For claim 11, Pan-Dinker discloses the invention as in claim 10. Pan-Dinker further discloses said mapping of the existing resource reservation to the changed topology includes the resource manager checking whether an overbooking of the transmission resources is occurring (Pan, col. 8 lines 28-32, a booking of resource that can not be mapped due to lacking of resource).

46. For claim 12, Pan-Dinker discloses the invention as in claim 11. Pan-Dinker further discloses upon the resource manager upon establishing an overbooking, one of clearing a connection contributing to the overbooking by assigning the connection to another class of service to be carried via another route (Pan, col. 9 lines 26-37, high priority service is given access to resource first, lower priority service later), and using coding with reduced resource requirements.

47. For claim 13, Pan-Dinker discloses the invention as in claim 12. Pan-Dinker further discloses said mapping of the existing reservation of resources to the changed topology includes at least one of preferring more recent connections to older connections; preferring voice connections to connections of other connection types (Pan, col. 9 lines 26-37, high priority service such as voice is given access to resource first, lower priority service later); preferring connections with at least one of a user feature-dependent priority and a service feature-dependent priority; preferring connections with relatively low resource requirements; and preferring connections set up outside the static resource reservation mode to connections set up during the static resource reservation mode during an assignment of transmission resources.

48. For claim 14, Pan-Dinker discloses the invention as in claim 13. Pan-Dinker further discloses recording the topology data relating to the topology of the packet-oriented communication network by a topology manager; and transferring the topology data from topology manager to the resource manager (Dinker, fig. 2, topology manager 203, state manager 202, Pan, fig. 2, resource manager, network topology monitor).

Conclusion

49. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

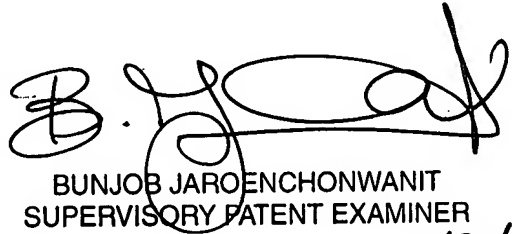
50. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hieu T. Hoang whose telephone number is 571-270-1253. The examiner can normally be reached on Monday-Thursday, 8 a.m.-5 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HH


BUNJOB JAROENCHONWANIT
SUPERVISORY PATENT EXAMINER
4/9/17